DETAILED ACTION

1. The preliminary amendment filed on 11/21/05 has been entered. The preliminary amendment cancels claims 1-10 and introduces claims 11-21.

2. Claim 21 has been canceled by the Examiner's Amendment. Therefore, claims 11-20 are pending in the application.

Oath Declaration

3. The oath/declaration filed on 02/16/07 is acceptable.

Information Disclosure Statement

4. The references listed in the information disclosure statement (IDS) submitted have been considered. The submission is in compliance with the provisions of 37 CFR 1.97. Form PTO-1449 is signed and attached hereto.

EXAMINER'S AMENDMENT

5. An examiner's amendment to the record appears below. Should the changes and or additions be acceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no latter than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Richard Anderson on 03/05/10.

6. The application has been amended as follows:

- Cancel claim 21

Allowable Subject Matter

7. Claims **11-20** are allowed. The following is an Examiner's statement of reasons for allowance:

Independent **claim 11** of the present application teaches, for example, A re-transmission control method for a transmitting device that transmits a codeword generated based on a first parity-check matrix to a receiving device, and re-transmits a k-th additional parity generated based on a k-th parity-check matrix to the receiving device when receiving a negative acknowledgement for the codeword or a (k-1)-th additional parity, where k is a positive integer, the re-transmission control method comprising: transforming a k-th parity-check matrix into an irreducible standard form so that the k-th parity-check matrix includes a k-th check symbol generator matrix; generating a (k+ 1)-th parity-check matrix including the k-th parity-check matrix transformed in the irreducible standard form; transforming the (k+ 1)-th parity-check matrix into the irreducible standard form so that the (k+l)-th parity-check matrix includes the k-th check symbol generator matrix and a (k+ 1)-th check symbol generator matrix; generating a generator matrix including the k-th check symbol generator matrix and the (k+l)-th check symbol generator matrix; generating the k-th additional parity based on the generator matrix; and transmitting the k-th additional parity to the receiving device.

The prior arts of record including the IDS filed by the applicant taken singly or in combination fail to teach, anticipate, suggest, or render obvious the foregoing limitations " *transforming a k-th parity-check matrix into an irreducible standard form so that the k-th parity-check matrix includes a k-th check symbol generator matrix; generating a (k+ 1)-th parity-check*

matrix including the k-th parity-check matrix transformed in the irreducible standard form; transforming the (k+ 1)-th parity-check matrix into the irreducible standard form so that the (k+l)-th parity-check matrix includes the k-th check symbol generator matrix and a (k+ 1)-th check symbol generator matrix; generating a generator matrix including the k-th check symbol generator matrix and the (k+l)-th check symbol generator matrix; generating the k-th additional parity based on the generator matrix; and transmitting the k-th additional parity to the receiving device". Consequently, claim 11 is allowed over the prior arts.

Independent **claim 16** of the present application teaches, for example, A transmitting device that transmits a codeword generated based on a first parity-check matrix to a receiving device, and re-transmits a k-th additional parity generated based on a k-th parity-check matrix to the receiving device when receiving a negative acknowledgement for the codeword or a (k-1)-th additional parity, where k is a positive integer, the transmitting device comprising an encoding unit that includes a k-th parity-check matrix transforming unit that transforms a k-th parity-check matrix into an irreducible standard form so that the k-th parity-check matrix includes a k-th check symbol generator matrix; a (k+l)-th parity-check matrix generating unit that generates a (k+l)-th parity-check matrix including the k-th parity-check matrix transformed in the irreducible standard form; a (k+l)-th parity-check matrix transforming unit that transforms the (k+l)-th parity-check matrix into the irreducible standard form so that the (k+l)-th parity-check matrix includes the k-th check symbol generator matrix and a (k+ 1)-th check symbol generator matrix; a generator matrix generating unit that generates a generator matrix including the k-th check symbol generator matrix and the (k+l)-th check symbol generator matrix; and an additional

parity generating unit that generates the k-th additional parity based on the generator matrix; and a transmitting unit that transmits the k-th additional parity to the receiving device.

The prior arts of record including the IDS filed by the applicant taken singly or in combination fail to teach, anticipate, suggest, or render obvious the foregoing limitations *"an encoding unit that includes a k-th parity-check matrix transforming unit that transforms a k-th parity-check matrix into an irreducible standard form so that the k-th parity-check matrix includes a k-th check symbol generator matrix; a (k+l)-th parity-check matrix generating unit that generates a (k+l)-th parity-check matrix including the k-th parity-check matrix transformed in the irreducible standard form; a (k+l)-th parity-check matrix transforming unit that transforms the (k+l)-th parity-check matrix into the irreducible standard form so that the (k+l)-th parity-check matrix includes the k-th check symbol generator matrix and a (k+ 1)-th check symbol generator matrix; a generator matrix generating unit that generates a generator matrix including the k-th check symbol generator matrix and the (k+l)-th check symbol generator matrix; and an additional parity generating unit that generates the k-th additional parity based on the generator matrix; and a transmitting unit that transmits the k-th additional parity to the receiving device"*. Consequently, claim 16 is allowed over the prior arts.

Dependent claims depend from allowable independent claims and inherently include limitations therein and therefore are allowed as well.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Esaw T. Abraham whose telephone number is (571) 272-3812. The examiner can normally be reached on M-F 8am-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Esaw T Abraham/
Primary Examiner, Art Unit 2112
03/05/10